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IUBMB Enzyme Nomenclature

EC 2.7.6.1

Common name: ribose-phosphate diphosphokinase

Reaction: ATP + D-ribose 5-phosphate = AMP + 5-phospho- α -D-ribose 1-diphosphate

For diagram of reaction [click here](#).

Other name(s): ribose-phosphate pyrophosphokinase; PRPP synthetase; phosphoribosylpyrophosphate synthetase; PPRibP synthetase; PP-ribose P synthetase; 5-phosphoribosyl-1-pyrophosphate synthetase; 5-phosphoribose pyrophosphorylase; 5-phosphoribosyl- α -1-pyrophosphate synthetase; phosphoribosyl-diphosphate synthetase; phosphoribosylpyrophosphate synthase; pyrophosphoribosylphosphate synthetase; ribophosphate pyrophosphokinase; ribose-5-phosphate pyrophosphokinase

Systematic name: ATP:D-ribose-5-phosphate diphosphotransferase

Comments: dATP can also act as donor.

Links to other databases: [BRENDA](#), [EXPASY](#), [GTD](#), [KEGG](#), [WIT](#), CAS registry number: 9015-83-2

References:

1. Hughes, D.E. and Williamson, D.H. Some properties of glutaminase of *Clostridium welchii*. *Biochem. J.* 51 (1952) 45-55.
2. Hurlbert, R.B. and Reichard, P. The conversion of orotic acid to uridine nucleotides *in vitro*. *Acta Chem. Scand.* 9 (1955) 251-262.
3. Remy, C.N., Remy, W.T. and Buchanan, J.M. Biosynthesis of the purines. VIII. Enzymatic synthesis and utilization of α -5-phosphoribosylpyrophosphate. *J. Biol. Chem.* 217 (1955) 885-895.
4. Switzer, R.L. Regulation and mechanism of phosphoribosylpyrophosphate synthetase. I. Purification and properties of the enzyme from *Salmonella typhimurium*. *J. Biol. Chem.* 244 (1969) 2854-2863. [Medline UI: [69193742](#)]

[EC 2.7.6.1 created 1961]

[Return to EC 2.7.6 home page](#)

[Return to EC 2.7 home page](#)

[Return to EC 2 home page](#)

[Return to Enzymes home page](#)

[Return to IUBMB Biochemical Nomenclature home page](#)